

Rec'd

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INTERNATIONAL SEARCH REPORT

International Application No.
PCT/EP 03/10293

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12P23/00 C12M1/36 //(C12P23/00,C12R1:645)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12P C12N C12M C12R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, FSTA, EMBASE, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 015 684 A (JOLLY SETSUKO OMATA ET AL) 18 January 2000 (2000-01-18) cited in the application the whole document --- -/--	1-10

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
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- *O* document referring to an oral disclosure, use, exhibition or other means
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- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- *A* document member of the same patent family

Date of the actual completion of the international search

18 March 2004

Date of mailing of the international search report

31/03/2004

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Wiame, I

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PCT/EP 03/10293

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	YAMANE YU-ICHI ET AL: "Influence of oxygen and glucose on primary metabolism and astaxanthin production by Phaffia rhodozyma in batch and fed-batch cultures: Kinetic and stoichiometric analysis" APPLIED AND ENVIRONMENTAL MICROBIOLOGY, vol. 63, no. 11, November 1997 (1997-11), pages 4471-4478, XP002274005 ISSN: 0099-2240 abstract page 4472, column 1, paragraph 6 - paragraph 8 page 4475, column 1, paragraph 2 -page 4476, column 2, paragraph 1; figure 4	1,3,5,8
X	WO 88 08025 A (DANISCO BIOTEKNOLOGI AS) 20 October 1988 (1988-10-20) the whole document	1,5
A	HO K P ET AL: "Growth and carotenoid production of Phaffia rhodozyma in fed-batch cultures with different feeding methods" BIOTECHNOLOGY LETTERS, vol. 21, no. 2, February 1999 (1999-02), pages 175-178, XP008028052 ISSN: 0141-5492 the whole document	1
A	FELL J W ET AL: "Separation of strains of the yeasts Xanthophyllomyces dendrorhous and Phaffia rhodozyma based on rDNA IGS and ITS sequence analysis" JOURNAL OF INDUSTRIAL MICROBIOLOGY AND BIOTECHNOLOGY, vol. 23, no. 1, July 1999 (1999-07), pages 677-681, XP002274006 ISSN: 1367-5435 table 1	10

Form PCT/ISA/210 (continuation of second sheet) (July 1992)

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International Application No
PCT/EP 03/10293

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6015684	A	18-01-2000	US 5922560 A	13-07-1999
			US 5466599 A	14-11-1995
			US 2003049241 A1	13-03-2003
			US 6413736 B1	02-07-2002
			AU 688280 B2	12-03-1998
			AU 5008693 A	08-11-1994
			EP 0708604 A1	01-05-1996
			JP 8508885 T	24-09-1996
			NO 954052 A	11-12-1995
			NZ 255742 A	26-05-1997
			WO 9423594 A1	27-10-1994
WO 8808025	A	20-10-1988	AT 93537 T	15-09-1993
			AU 620034 B2	13-02-1992
			AU 1688988 A	04-11-1988
			CA 1334512 C	21-02-1995
			DE 3883539 D1	30-09-1993
			DE 3883539 T2	17-03-1994
			DE 367765 T1	16-08-1990
			DK 513389 A	16-10-1989
			WO 8808025 A1	20-10-1988
			EP 0367765 A1	16-05-1990
			IE 60606 B1	27-07-1994
			JP 11069969 A	16-03-1999
			JP 7014340 B	22-02-1995
			JP 2504101 T	29-11-1990
			KR 9614619 B1	19-10-1996
			NO 885560 A	14-02-1989
			US 5679567 A	21-10-1997
			US 5599711 A	04-02-1997
			US 5709856 A	20-01-1998
			US 5712110 A	27-01-1998
			US 5356810 A	18-10-1994
			US 5972642 A	26-10-1999

Form PCT/ISA/210 (patent family annex) (July 1992)